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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,304	03/30/2004	Masaaki Nakayama	249-336 (AMK)	1823

23117 7590 09/30/2008
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EXAMINER	
AFZALI, SARANG	

ART UNIT	PAPER NUMBER
3726	

MAIL DATE	DELIVERY MODE
09/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/812,304	NAKAYAMA ET AL.	
	Examiner	Art Unit	
	SARANG AFZALI	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed 9/12/2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 21* is/are pending in the application.

4a) Of the above claim(s) *1-9 and 14-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-13 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/12/2008 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as obvious over Kaiser et al. (US20030181302A1) in view of Ohshima et al. (US 5,763,345).

4. Regarding claim 10, Kaiser et al. teach a disc roll comprising: a plurality of annular disc members 29 each defining a hole and having a peripheral surface; and a rotary shaft 17 fitted into the holes of said annular disc members 29 by insertion, whereby the peripheral surfaces of said disc members serve as a conveying surface of the disc roll, wherein said disc members 29 comprise an inorganic fiber, mica and a clay (paragraph [0010], last three lines).

However, Kaiser et al. do not explicitly teach that the clay has particles with a particle size of 5 μm or larger of not higher than 30% by weight based on the weight of the clay and that clay being elutriated.

Ohshima et al. teach that it is well known in the art for natural clay to contain an average particle size of 0.5 μm after purification by elutriation (col. 1, lines 27-28 & 35-36).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Kaiser et al. with elutriated natural clay having an average particle size of 0.5 μm, as taught by Ohshima et al., in order to provide a disc roll comprised of desired and suitable material content.

Note that Ohshima et al. teach that, in general, finer clay particles result in smooth mobility, uniform molding density, and a minimum deformation due to drying and firing (col. 2, lines 29-35).

Furthermore, Ohshima et al.'s explicit teaching of clay content of particles with an average particle size of 0.5 μm makes it mathematically impossible to have clay content of particles with a particle size of 5 μm or larger in an amount of 30% or higher by weight based on the weight of the clay.

5. Regarding claim 12, the inorganic fiber and clay are present in the claimed ranges (see paragraph [0056], last three lines).

6. Regarding claim 13, mica is present in the claimed range (see paragraph [0056], last three lines).

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser et al. in view of Ohshima et al., as applied to claim 10 and further in view of Asaumi et al. (US 4,533,581).

Kaiser et al./Ohshima et al. teach the invention cited above with the exception of the mica being muscovite.

Asaumi et al. teach that it is known to use muscovite mica in disc rollers (col. 2, lines 17-22).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Kaiser et al./Ohshima et al. with muscovite, in light of the teachings of Asaumi et al., in order to provide a disc roll having an excellent heat resistance property as suggested by Asaumi et al.

8. Claim 21 is rejected under 35 U.S.C. 103 (a) as obvious over Kaiser et al. (US20030181302A1) in view of Ohshima et al. (US 5,763,345). Kaiser et al. teach a disc roll comprising: a plurality of annular disc members 29 each defining a hole and having a peripheral surface; and a rotary shaft 17 fitted into the holes of said annular disc members 29 by insertion, whereby the peripheral surfaces of said disc members serve as a conveying surface of the disc roll, wherein said disc members 29 comprise an inorganic fiber, mica and a clay (paragraph [0010], last three lines).

However, Kaiser et al. do not explicitly teach that the clay has being elutriated.

Ohshima et al. teach that it is well known in the art to purify natural clay impurities by elutriation (col. 1, lines 35-36).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Kaiser et al. with elutriated clay as taught by Ohshima et al., in order to provide a disc roll comprised of desired and suitable material content.

Note that Ohshima et al. teach that the finer (more purified) clay particles result in smooth mobility, uniform molding density, and a minimum deformation due to drying and firing (col. 2, lines 29-35).

Response to Arguments

9. Applicant's arguments with respect to claims 10-13 and 20-21 filed 9/12/2008 have been considered but are not persuasive.

10. Applicant's arguments, see "Remarks/Arguments", page 1, paragraph 3, is mainly that Ohshima only refers to "elutriation of clay as a disadvantageous process" and that this disclosure "would not lead those of ordinary skill in the art to elutriate clay for a disc roll as defined in claims 10 and 21." Applicant further cites the Federal Circuit's decisions and Supreme Court's decision (pages 1-3) to support the assertion that Ohshima's "disadvantageous process" teaches away from Applicant's invention and would not in any manner improve Kaiser.

The Examiner respectfully disagrees with this argument. Note that the Examiner only relies on Ohshima to teach that it is well known in the art for natural clay to have an average grain size of 0.5-2.0 μm after purification and that the purification can be done by elutriation (col. 1, lines 27-28 and 35-36) irrespective of the Applicant's assertion that Ohshima discloses an elutriation process which is a disadvantageous process.

Surely, it is not sound to argue that since an end product made by a certain process is not suitable for a certain application, then that process is not capable of making that end product.

The purification of the clay particles by elutriation process which results in the claimed range of particle size, is explicitly disclosed by Ohshima and as such, the Examiner believes that one of ordinary skill in the art, at the time of invention would have been motivated to utilize Ohshima's general teaching of clay particle size and elutriation process in modifying Kaiser in order to provide a disc with a desired and suitable material content.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARANG AFZALI whose telephone number is (571)272-8412. The examiner can normally be reached on 7:00-3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarang Afzali/
Examiner, Art Unit 3726
9/25/2008

/DAVID P. BRYANT/
Supervisory Patent Examiner, Art Unit 3726